PATENT CLAIMS

1. A method of processing a workpiece (52), in which a workpiece (52) to be processed is fastened to a work carrier (10) by means of a solid (62), the work carrier (10) containing a porous material or being made of a porous material.

2. The method as claimed in claim 1, wherein a gas-permeable work carrier (10) is used, and wherein a vacuum (64) is generated at the work carrier (10) for the fastening, preferably after the application of the solid (62) in liquefied form and/or before the hardening of the solid (62).

3. The method as claimed in claim 1 or 2, wherein the solid (62) for separating the workpiece (52) and work carrier (10) is released by means of a solvent (90), the solvent (90) penetrating into pores (14 to 20) of the work carrier (10).

4. The method as claimed in claim 3, wherein a work carrier (10) which is permeable to solvent (90) is used, and wherein, to separate the workpiece (52) and work carrier (10), solvent penetrates into passages (24, 26) from a pore or from a plurality of pores (14 to 20) through the work carrier (10) up to the solid (62), preferably by capillary action or by the generation of a positive pressure (104) or of a vacuum (102), in particular on a side of the work carrier (10) which is remote from the workpiece (52).

5. The method as claimed in one of the preceding claims, wherein the porous material is a ceramic, a glass, a glass ceramic, a metal, in particular a sintered metal, a metal ceramic or a sintered material, and/or wherein the average pore size has a value of between 20 μm and 500 μm or between 50 μm and 100 μm, and/or wherein the porosity of the porous material has a value of between 20% and 50%, and/or wherein the value of the open porosity of the porous material lies between 10% and 600 or between 20% and 50%, and/or wherein at least 10% or at least 20% of the pore volume belongs to pore passages (24, 26) passing through the porous material, and/or

wherein the porous material used is P65 or P55, and/or wherein the pores (14 to 22) are arranged irregularly and/or according to a uniform distribution.

6. The method as claimed in one of the preceding claims, wherein the workpiece (52) is thinned on the work carrier (10), in particular to a thickness less than 100 μm or less than 20 μm, preferably ground and/or polished and/or etched, in particular in a wet-chemical, chemical or chemical/physical manner, and/or the workpiece (52) on the work carrier (10) is subjected to a lithographic process, in particular irradiation, and/or the workpiece (52) on the work carrier (10) is subjected to a layer deposition process.

7. The method as claimed in one of the preceding claims, wherein the solid (62) contains wax or adhesive or a plastic material or a double-sided adhesive tape or is made of one of these materials.

8. The method as claimed in one of the preceding claims, wherein the workpiece (52) contains a semiconductor material, in particular silicon, or is made of a semiconductor material, and/or wherein the workpiece (52) is a semiconductor wafer.

9. The method as claimed in one of the preceding claims, wherein the solid (62) fills the entire intermediate space between workpiece (52) and work carrier (10), or the solid (62) fills only part of the intermediate space between workpiece (52) and work carrier (10), in particular a plurality of regions separated from one another by intermediate spaces or an annular region which surrounds a region which is not filled.

10. A work carrier (10), in particular a work carrier (10) used in a method as claimed in one of the preceding claims, having the shape of a plate or a disk, wherein the work carrier (10) contains a porous material or is made of a porous material.

11. The work carrier (10) as claimed in claim 10, wherein the work carrier (10) has the outline of a semiconductor wafer (52), and wherein the diameter (DM1) of the work carrier (10) is equal to the diameter of the semiconductor wafer (25).